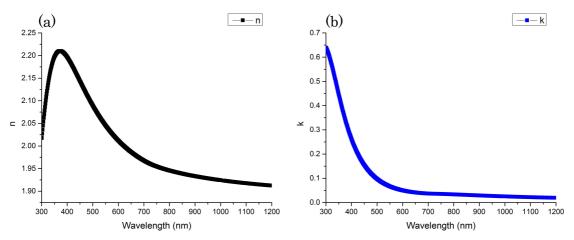
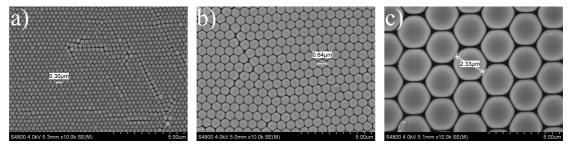
## **Additional material**



The optical index of a-Si based on the ellipsometry measurement. (a) n, (b)k.



Measurements of the diameters of the PS spheres with three types of sizes. a) sub-wavelength (300 nm), b) mid-wavelength (640 nm) and c) infrared-wavelength (2300 nm)